

Miscellaneous Notes

1. ON THE CRANIAL CHARACTERS OF *MACACA SILENUS* (LINN.) (PRIMATES : CERCOPITHECIDAE)

(With a plate)

The specific differences in the cranial characters of catarrhine monkeys are not conspicuous and are often masked by individual variations. This caused many earlier workers to rely more on external characters and devote less attention to cranial variations. In many cases the published accounts of specific cranial characters are not based on a sufficiently good series of specimens to sift out the individual variations. Of the Indian species of the genus *Macaca* (Primates : Cercopithecidae), the least known in this respect is *M. silenus* (Linn.), the Liontailed Macaque of the Western Ghats of India. The only known descriptions of the cranial characters of this species are those of Anderson (1879) and Pocock (1939). Elliot (1912) records only the measurements of a skull. Anderson's description of the skull, based on a single male specimen, is extremely general and vague. The features described by him are either common or individual, none being characteristic of the species. Pocock, having only an incomplete skull, relied for the most part on Anderson's description, adding as far as the broken specimen would permit some of his own observations. The sulky, savage nature of this monkey and its inaccessible forest abode make it difficult to procure material and there is a paucity of skulls in many zoological collections. The present detailed description of the cranial characters of this species is based on a series of five specimens (2 ♂♂ and 3 ♀♀). In addition, four adolescent skulls were examined to study the lines of cranial development. I wish, in this connection, to express my sincere thanks to the Bombay Natural History Society who kindly spared two specimens for my examination.

DESCRIPTION

The brow-ridge is well developed and curved backwards acutely. The temporal ridges start from the two sides of the brow-ridge and

join the occipital crest separately, although in one skull they are very close together at this confluence. In female skulls the temporal ridges are very faint and never converge posteriorly. The occipital ridge in the male is well developed, especially at the mastoid region. The orbital ring and the inter-orbital septum are more vertical and steeply curved than in allied species. In adult male skulls the maximum width of the orbital margin, which is across the lowermost point of the vertical wall of the orbit (jugal), is slightly greater than the mastoid width.

The jaws are fairly long, but not as long as in *M. nemestrina* (Linn.). The anterior zygomatic root is directly in a line running vertically in between the second and the third molars. In short-jawed forms the corresponding line will be through the second molar. The post-canine depression on the sides of the muzzle is prominent and extends upwards along the ascending process of the maxilla up to the base of the inter-orbital septum. The nasal and the ascending process of the maxilla tend to be slightly raised above the general level of the maxilla, so that this part often forms a distinct table on the muzzle.

Ventrally, the pterygoids curve outwards symmetrically so that the mesopterygoid fossa is narrowest in the middle. The posterior palatine foramina are situated anterior to, or in line with, the third or last molar, never posterior to it, which again is an indication of jaw length. The transbullar width is markedly less than the mastoid width, as the external auditory meatus does not extend up to the fringe of the squamosal. This feature is more marked in female skulls.

The measurements of the specimens examined by me are noted in the table on page 248.

DIFFERENCES IN CRANIAL CHARACTERS BETWEEN THE SEXES

Certain differences between the sexes in cranial characters are particularly striking. Many of them may be common to the genus, but as this aspect has not been discussed much in this genus, it may be worth recording them here. The most obvious is the marked difference in size, the female skull being much smaller. On the whole, the female skull shows less muscular development, the various crests that are present in the males are often absent or feebly developed in the female. Generally, it can be said that the female skull retains the juvenile condition in its cranio-muscular relations. The transbullar width is less than the mastoid width by a greater

TABLE
CRANIAL MEASUREMENTS (IN MM.) OF *MACACA SILENUS* (LINN.)

| Reg. No. | Sex | Total length | Condyllo basal length | Facial-axis length | Palatal length | Cheek teeth row length | Bulla length | Zygomatic width | Mastoid width | Transbulbar width | Maxilla width at canines | Inter-orbital septum thickness | Mandibular length | Lower cheek teeth length |
|------------------|--------|--------------|-----------------------|--------------------|----------------|------------------------|--------------|-----------------|---------------|-------------------|--------------------------|--------------------------------|-------------------|--------------------------|
| 7752 | Female | 103.2 | 77 | 44.3 | 38 | 28 | 25.5 | 73.2 | 59.2 | 51.5 | 26 | 3.8 | 69 | 31.7 |
| 7753 | Female | 106.2 | 80.4 | 48.2 | 43.2 | 28 | 26.5 | 72 | 62.2 | 54 | 26.3 | 3.3 | 69 | 33 |
| 7750 | Female | 107.7 | 80 | 50 | 42.6 | 28.2 | 25.6 | 73.2 | 61.2 | 53.5 | 26 | 4 | 69 | 29 |
| M10 B.N.H.S. | Male* | 127 | 103 | 68 | 58 | 31.2 | 31.8 | 87.4 | 71 | 62.4 | 36.4 | 6.2 | 89.5 | 48.7 |
| M363 B.N.H.S. | Male | 135 | 107 | 69.6 | 62 | 33.2 | 35.6 | 93.3 | 76.2 | 69.8 | 38 | 6.8 | 90.7 | 40.1 |

* This skull is unsexed, but is obviously male

1. *Facial-axis length*: Taken from the anterior end of the muzzle to the maxillo-sphenoid suture in the meso-pterygoid fossa.
2. *Transbulbar width*: Transverse distance between the extremities of the external auditory meatuses.
3. *Mandibular length*: Maximum length at the alveolar line.

